

Vulvodynia

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Definition

Vulvodynia is Chronic vulvar discomfort with a duration of at least 3 months in which other pathologic etiologies have been ruled out. Discomfort may appear in the form of pain, burning, itching, dyspareunia, stinging, rawness of a constant or intermittent nature.

Vulvodynia usually starts suddenly and may last for months to years. The pain may affect daily normal activities and cause problems in a marital relationship because it can make sexual intercourse painful.

Prevalence

Approximately one in six women may be affected by vulvodynia at some point in their lives. In one survey by Harlow and Stewart (1), 16% of women aged 18 to 64 reported experiencing vulvar pain at least for 3 months.

The same study showed that the highest incidence of vulvodynia was among women younger than 25 years of age. The incidence decreased till age 44 and then remained relatively constant through age 64.

Risk Factors

1. Injury/irritation of the nerves surrounding the vulva. It can result from stretch, transection or infection of nerve, tumors, cysts, vaginal surgery which may increase the risk of pudendal N. injury, vaginal delivery, episiotomy, laser ablation of vulvar skin.
2. Early use of oral contraceptives (< 17 years).
3. Early age at first sexual intercourse (15 years old or less).
4. Early menarche (11 years old or less).
5. Pain on first use of tampon.

Risk Factors (Cont.)

Other risk factors include:

1. History of recurrent vaginitis.
2. Allergies or localized hypersensitivity of skin.
3. Chronic irritation: application of medications & infective agents e.g. viruses.
4. Pelvic floor descent which stretch the pudendal nerve.
5. Muscle spasms.
6. Declining estrogen levels at menopause.
7. History of sexual abuse.
8. Diabetes.
9. Precancerous or cancerous conditions of the cervix.
10. A car accident.

Classification

It can be either

1. Primary: pain has been present since first sexual intercourse/tampon use.
2. Secondary: pain started after first intercourse/tampon.

OR

1. Pure: occurs only with touch (e.g. at sex).
2. Mixed, occurs both with touch and at other times (e.g. on sitting).

OR

1. Organic: have an identifiable cause.
2. Idiopathic: no identifiable cause.

Nerve Supply To Vulvodynia

The vulva receives nervous input from 3 major nerves:

The pudendal nerve:

Originates from the S2-S4 region of the spinal cord and has 3 branches: the inferior hemorrhoidal (rectal) nerve, the perineal nerve & the dorsal nerve of the clitoris.

It transmits sensory signals to the genitalia & perineum and supplies motor function to the pelvic floor & external sphincters of the urethra & rectum.

Nerve Supply To Vulva (Cont.)

The ilioinguinal and genitofemoral nerves:

Both originate in the L1-L2 segments of the spinal cord. They only have sensory functions.

The ilioinguinal nerve transmits sensory signals to the inguinal (groin) area, symphysis (mons pubis) and anterior vulva.

The genitofemoral nerve transmits sensory signals to the anterior vulva and the labia majora.

Nerve Supply To Vulva (Cont.)

The pain of vulvodynia is considered to be a neuropathic pain which can be:

1. Allodynia: a painful response to a stimulus that does not ordinarily cause pain.
2. Hyperalgesia: an exaggerated pain reaction to a painful stimulus.
3. Dysesthesia: the perception of an unpleasant & abnormal sensation produced by a non-noxious stimulus.

Diagnosis

1-History Taking

Vulvodynia is a diagnosis of exclusion. Accurate diagnosis of vulvodynia depends upon a careful medical history taking. Ask about the following:

1. An initiating factor such as surgery, childbirth, sexual abuse or trauma.
2. Use of menstrual pads or panty liners.
3. Age at onset of menarche.
4. Age at initiation of oral contraceptives.
5. Urinary symptoms.
6. Allergies, other medical conditions, medications given.

Diagnosis (Cont.)

2-Symptoms

1. Tearing pain: occurs upon contact with genital area.
2. Itching with/without pain.
3. Persistent pain.
4. Dyspareunia.
5. Skin changes in the form of erythema, scaling or fissures.

Diagnosis (Cont.)

3-Signs

Multidisciplinary Approach: Evaluation & treatment of vulvodynia should utilize a multidisciplinary approach:

1. A neurologist,: to assess electromyographic studies of the pelvis.
2. A dermatologist: check for any vulvar dermatoses.
3. An anesthesiologist: manage pain medications & evaluate trigger points.
4. A Psychiatrist: to evaluate any psychic disturbances or depression.
5. A physical therapist skilled in the use of biofeedback may be needed for a biofeedback evaluation of the pelvic floor musculature.
6. A plastic surgeon: In cases in which the patient has undergone prior vulvar surgery and if major skin grafting is required at subsequent surgery.

Diagnosis (Cont.)

Physical Examination:

To minimize pain, the use of an intravaginal speculum is better avoided. A thorough examination of the vulvar area is required to localize the pain. It is important to evaluate the following:

1. Size & shape of the clitoris, labia minora, possible inflammation of the Bartholin minor vestibular glands (using the Q-tip test).
2. The peri-anal area should be checked for whiteness and/or fissuring.
3. The general color of the genital and anal skin should be noted.

Diagnosis (Cont.)

4. A neurologic examination to evaluate reflexes in the vaginal & rectal areas as well as allodynia.
5. Areas surrounding the vulva should be evaluated for pain including any coccygeal pain, mons pubis pain, upper inner thigh pain, piriformis (pelvic floor muscle) pain and sciatic pain.
6. Pelvic muscles tone should be assessed if there is pain on penetration.
7. Any pelvic prolapse should also be noted.
8. Colposcopy and a directed biopsy in suspicious cases should be performed to confirm the diagnosis.

Diagnosis (Cont.)

Laboratory Testing

1. Potassium hydroxide and normal saline wet mounts for microscopic examination of vaginal secretions, vulvar skin and perianally, if needed.
2. Tests to rule out metabolic diseases such as hypothyroidism, hyperthyroidism, glucose intolerance and autoimmune diseases.
3. Determination of serum estradiol and FSH levels to rule out menopause or premature ovarian failure.

Treatment of Cyclical Vulvodynia

1. Fluconazole (Diflucan), 150 mg orally once weekly for two months and then once every other week for two months.
2. Other anticandidal agents that may be used include:
 1. Long-term therapy with topical nystatin (Micostatin Cream, Mytrex Cream).
 2. Miconazole nitrate (Monistat-Derm Cream).
 3. Clotrimazole (Lotrimin).

Evidence Based Recommendation for treatment of Vulvodynia

Clinical Recommendation	Evidence Rating	Reference
Vulvodynia should be suspected in any female with a history >3 M of pain at the introitus or vulva	B	1,2
Tricyclic antidepressants should be considered for the treatment	B	3,4,5,6
SSRI and gabapentin (Neurontin) should be considered for symptomatic relief	B	3,7

Evidence Based Recommendation for treatment of Vulvodynia

Clinical Recommendation	Evidence Rating	Reference
Cognitive behavioral therapy should be used to decrease vulvar pain with intercourse	B	6
Biofeedback & physiotherapy are considered to help patients regain control of the pelvic floor musculature	B	8,6,9
Perineoplasty should be reserved for women with severe vulvodynia	B	8

Quoted from BARBARA D. REED, M.D., Vulvodynia: Diagnosis and Management. In American Family Physician, 1 April, 2006

Treatment of Non Cyclical Vulvodynia

No one treatment works for every woman and a combination of treatments may be necessary to control symptoms. It may take weeks/months for a treatment regimen to improve your symptoms. Available options include:

Medications:

1. Tricyclic antidepressants that can help lessen chronic pain include:

1. Amitriptyline: Decreases neuronal hypersensitivity. It is started at a dose of 25 mg at bedtime for 10 days, then 50 mg at bedtime for 4-6 months. Side effects include dry mouth, fatigue, constipation & weight gain.
2. Imipramine (Tofranil).
3. Desipramine (Norpramin): same as amitriptyline but less common side effects.

Treatment (Cont.)

2. Anticonvulsants:

1. Gabapentin (Neurontin): Decreases neuronal hypersensitivity. Dose 300 mg daily, increasing every five days by 300 mg/day. Maximum dose is 2700 mg/day. Headaches, nausea, vomiting, fatigue, and mild dizziness.

3. Selective serotonin reuptake inhibitors. E.g. Venlafaxine (Effexor). It decreases neuronal hypersensitivity. The drug is started at a dose of 37.5 & increased gradually to 75-150 mg/day. Side effects include Anorgasmia, GIT manifestations & anxiety. Blood pressure, electrolytes & lipid levels should be monitored periodically.

4. Calcium citrate: It decreases oxalate deposition in vulvar tissue. It is given in combination with other treatments. Dose is 2-4 tablets twice daily. It has minimal side effects.

5. Antihistamines: to reduce itching.

Treatment (Cont.)

Biofeedback therapy:

This therapy can help reduce pain by teaching you how to control specific body responses. The goal of biofeedback is to help you enter a relaxed state in order to decrease pain sensation. To cope with vulvodynia, biofeedback can teach you to relax your pelvic muscles, which can contract in anticipation of pain and actually cause chronic pain itself. Continue biofeedback daily for 16 weeks.

Cognitive behavior therapy:

It increases understanding of the disorder and encourages patients to find ways to minimize symptoms. Eight two-hour group sessions over 12 weeks. Recommended duration can be up to 1.5 years.

Treatment (Cont.)

Physical therapy:

A physical therapist with experience treating vulvar pain can identify problems in your pelvic floor that may be contributing to your symptoms.

Physical therapy techniques used for vulvodynia include massage, transcutaneous electrical nerve stimulation (TENS) therapy, and exercises to strengthen your pelvic floor muscles. Other approaches include therapeutic ultrasound and trigger-point pressure, in which hard, painful knots in your muscles are released.

Treatment (Cont.)

Local anesthetics. E.g. lidocaine ointment, can provide temporary symptom relief and can be applied 30 mins before intercourse to reduce discomfort.

Daily topical estrogen may alleviate pain. Vaginal estrogen tablets may be prescribed to improve vaginal dryness or atrophy.

Trigger point injections: direct steroid injection into a trigger point combined with a numbing agent.

Treatment (Cont.)

Surgery in the form of perineoplasty is reserved for patients with localized cases & severe debilitating symptoms who does not respond to other therapies. Surgery consists of removal of hypersensitive tissue & replacement with vaginal mucosa advancement. Side effects & complications include acute discomfort, bleeding, hematoma formation, infection, wound dehiscence, vaginal stenosis and vaginismus.

Inosine pranobex (Isoprinosine; not available in the United States) and acupuncture may be of help.

Self Care

1. Advise patient that improvement will not be immediate but will occur with time.
2. Cold compresses directly on external genitalia may improve pain & itching.
3. No tightfitting and no nylon underwear. Advise 100% cotton underwear to increase ventilation and dryness and sleep without underwear at night. Wash new underwear before wearing. Always rinse underwear thoroughly after washing to remove soap residue.

Self Care (Cont.)

4. Avoid being in a wet swimsuit for long time. This may invite bacteria & yeast in the genital area.
5. Avoid hot tubs. It may lead to discomfort and itching. Use plain water to gently clean your vulva and keep the area dry.
6. Advise lubricants before sexual intercourse.
7. Advise an antihistaminic at bedtime to reduce itching.
8. Avoid triggering factors which make vulvar pain worse. these tend to differ for each woman. E.g. soaps, clothing dyes, contraceptive devices, creams and bath products.
9. Regular exercise can help ease chronic pain but not those which put direct pressure on the vulva, such as bicycling.

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Thank you